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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/780,999

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John A. Johansen

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23720

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WILLIAMS, MORGAN & AMERSON, P.C.
10333 RICHMOND, SUITE 1100
HOUSTON, TX 77042

EXAMINER

WAKS, JOSEPH

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 01/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/780,999

Applicant(s)

JOHANSEN ET AL.

Examiner

Joseph Waks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 15, 17-27, 30, 32-34, 36-38 and 46-48 is/are rejected.
- 7) ☒ Claim(s) 6-14, 16, 23, 28, 29, 31, 35, 39-45 and 49-51 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0904, 1104.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed November 22, 2004 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance of the NO309737B1 application, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

3. Color photographs and color drawings are acceptable only for examination purposes unless a petition filed under 37 CFR 1.84(a)(2) is granted permitting their use as acceptable drawings. In the event that applicant wishes to use the drawings currently on file as acceptable drawings, a petition must be filed for acceptance of the color photographs or color drawings as acceptable drawings. Any such petition must be accompanied by the appropriate fee set forth in 37 CFR 1.17(h), three sets of color drawings or color photographs, as appropriate, and, unless

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already present, an amendment to include the following language as the first paragraph of the brief description of the drawings section of the specification:

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

Color photographs will be accepted if the conditions for accepting color drawings have been satisfied.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 24 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The relative motion of a rotating

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magnet versus stationary magnet cannot generate electricity to provide the electrical power output.

7. Claim 24 is also rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The stationary winding is critical and essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The Maxwell laws of magnetism require the alternating magnetic field to perpendicularly cross the closed loop windings to induce the electric current in the windings.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2, 38 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Stone (US 3,373,806).

C discloses invention as claimed: a sub-sea installation including an oil production flow line 62, a turbine 72 operatively connected to the flow line, the turbine being rotatable by fluid flowing through the flow line to generate the electrical power output when rotated.

Re claims 38 and 46, Stone discloses the sub-sea installation as claimed. Claim 38 that merely recites connecting and using the disclosed features together are inherent to the disclosed structure.

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10. Claims 1-3, 25-27, 38 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Pearson (GB 2266546A).

Pearson discloses invention as claimed: a sub-sea installation including a production injection flow line 8, a turbine 13 operatively connected to the flow line, the turbine being rotatable by fluid flowing through the flow line to generate the electrical power output when rotated.

Re claims 38 and 46, Pearson discloses the sub-sea installation as claimed. Claim 38 that merely recites connecting and using the disclosed features together are inherent to the disclosed structure.

11. Claims 1-3, 15, 17-20, 30, 38, and 46-48 are rejected under 35 U.S.C. 102(b) as being anticipated by Abramov et al. (US 6,460,936).

Abramov et al. disclose in Figures 1 and 14 invention as claimed: a sub-sea installation including a production and injection flow line 56, a turbine 302 operatively connected to the flow line, the turbine being rotatable by fluid flowing through the flow line to generate the electrical power output when rotated.

Re claims 15 and 17, Abramov et al. disclose in Figure 14 an electrically operated component 184 including a control module 190, wherein the electrical power output is supplied to the electrically operated component.

Re claims 18 and 19, Abramov et al. disclose in Figure 14 the battery 186.

Re claims 38, and 46-48, Abramov et al. disclose the sub-sea installation as claimed. Claim 38 that merely recites connecting and using the disclosed features together are inherent to the disclosed structure.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abramov et al. (US 6,460,936) in view of Tubel et al. (US 5,839,508).

Abramov et al. disclose the sub-sea installation essentially as claimed. However, Abramov et al. do not disclose the control valve controlling the fluid flow to the turbine.

Tubel et al. disclose a downhole apparatus including a turbine generator 32, 33, 42 including a control valve 30 to control the fluid flow to the turbine and having one position to allow the flow through the turbine and a second position to bypass the turbine.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the installation as taught by Abramov et al. and to provide the control valve as taught by Tubel et al. for the purpose of regulating the fluid flow through the turbine.

14. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pearson (GB 2266546A) in view of Kosmala et al. (EP 1106777A1).

Pearson discloses the sub-sea installation essentially as claimed. However, Pearson does not disclose a control module for controlling the turbine.

Kosmala et al. disclose in Figures 12-14 and 24 a drilling tool having a control module for the purpose of efficiently operating the turbine 50, 52.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the installation as taught by Pearson and to provide the control module as taught by Kosmala et al. for the purpose of efficiently operating the turbine.

15. Claims 21, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abramov et al. (US 6,460,936) in view of Skoblo (WO 99/39080).

Abramov et al. disclose the sub-sea installation essentially as claimed. However, Abramov et al. do not disclose a control module for controlling the turbine wherein the control module causes said turbine to selectively be in at least a first state wherein the turbine generates electrical power, and a second state wherein the turbine does not generate electrical power.

Skoblo disclose a drilling tool having a control module 13 connected to the input load switch 13 connecting or disconnecting the load from the generator 9 thus causing the turbine to generate or not generate electrical power (Re page 7, lines 19- 29 and page 8, lines 1-11, for the purpose of modulating the turbine load.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the installation as taught by Abramov et al. and to provide the control module as taught by Skoblo for the purpose of modulating the turbine load.

16. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stone (US 3,373,806) in view of Jurgens (US 4,415,823).

Stone discloses the sub-sea installation essentially as claimed. However, Stone does not disclose the turbine including a rotary member having a plurality of blades and at least one rotating magnet and a fixed housing, wherein rotation of said rotary member causes relative

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movement between the at least one rotating magnet and the fixed housing to generate the electrical power output.

Jurgens discloses electrical turbine generator located in a wellbore having a rotary member including blades 14 and permanent magnets 39 and a fixed housing 41, 42 that is capable of producing electric power required for wellbore located electrical systems that can be accommodated within the restrained space of the wellbore.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the sub-sea installation as taught by Stone and to provide the turbine including a rotary member having a plurality of blades and at least one rotating magnet and a fixed housing as taught by Jurgens for the purpose of providing a turbine capable of producing electric power required for the wellbore located electrical systems that can be accommodated within the restrained space of the wellbore.

17. Claims 30, 33, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pearson (GB 2266546A) in view of Abramov et al. (US 6,460,936).

Pearson discloses the sub-sea installation essentially as claimed and including the sub sea Christmas tree 30. However, Pearson does not disclose at least one electrical power storage device fed by the electrical power output and the at least one electrically operated component powered by the at least one electrical power storage device.

Abramov et al. disclose in Figure 14 the sub-sea installation including an electrical power storage device 186 fed by the electrical power output and the electrically operated component 190 powered by the electrical power storage device for the purpose of generating a control signal for the monitoring the well operation.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the installation as taught by Pearson and to provide the electrical power storage device fed by the electrical power output and the electrically operated component powered by the electrical power storage device as taught by Abramov et al. for the purpose of generating a control signal for the monitoring the well operation.

18. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pearson (GB 2266546A) in view of Abramov et al. (US 6,460,936) as applied to claim 33 above and further in view of Skoblo (WO 99/39080).

The combined sub-sea installation disclosed all elements essentially as claimed. However, it does not disclose a control module for controlling the turbine wherein the control module causes said turbine to selectively be in at least a first state wherein the turbine generates electrical power, and a second state wherein the turbine does not generate electrical power.

Skoblo disclose a drilling tool having a control module 13 connected to the input load switch 13 connecting or disconnecting the load from the generator 9 thus causing the turbine to generate or not generate electrical power (Re page 7, lines 19- 29 and page 8, lines 1-11, for the purpose of modulating the turbine load.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined installation and to provide the control module as taught by Skoblo for the purpose of modulating the turbine load.

Allowable Subject Matter

19. Claims 6-14, 16, 23, 28, 29, 31, 35, 39-45, 49, 50 and 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Re claims 6-11 and 39-42, the feature of the speed sensor for sensing a rotational speed of the turbine or direction sensor for sensing the direction of turbine rotation, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Re claims 12-14 and 43-45, the feature of the first pressure sensor sensing the first pressure on one side of said choke valve and the second pressure sensor sensing the second pressure on the other side of the choke valve, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Re claims 16 and 31, the feature of the electrically operated component including a valve actuator, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Re claims 23, 35, 49 and 50, the feature of the control module having at least one charge sensor for sensing the charge level of the electrical power storage device, wherein the charge level determines the selection of the first and second states of the turbine, are neither disclosed nor taught by the prior art of record.

Re claims 28, 29 and 51, the feature of the acoustic transmitter and acoustic receiver actuator, in combination with the other limitations present, are neither disclosed nor taught by the prior art of record.

Prior Art

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (571) 272-2037. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph Waks
Primary Examiner
Art Unit 2834

1/13/05